

Work Order ID 58803

Wednesday, May 19, 2010 9:22:16 AM

Page 1

Item ID: D350-636-012

Accept



Setup Start



Revision ID:

Item Name: Skidtube RH

Stop



Start Date: 5/18/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 5/25/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date: 10-5-19

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D2750

Rev F

100

0.00



DOCUMENT CONTROL

DC

0.00

Memo

Document Control

Photocopy blue file and type labels per PPP D350-636-012 CHG 005

Siobalco

for CL 10/06/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Run Start
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

110



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1- Mark cut line on aft end of D2600-3-Bent using Jig DT 8150. Cut to length as per Dwg D2750. Deburr end

2-Drill pilot holes as per Dwg D2750 sheet 5 (D2750-2 details).Drill using drill Jig DT8150 & DT8863 .

3- Mark fwd end for cutting using Drill Jig DT 8150 & DT8863 and cut as per dwg D2750. Deburr.

4- Drill fwd step holes using DT9616. Ensure proper positioning.

5-Drill pilot holes for blade fitting bolts using DT8983. Open to 0.500"

6- locate DT8329 off of blade fitting bolt holes and drill pilot holes blade fitting.

7-Open up holes for Detail K to 0.375" (4 holes per side) blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open holes for ground handling and detail L to 0.500" (8 holes per side)

8-Drill pilot holes for wearplates as per Dwg D2750 using DT8108. Open to 0.297".

9-Open up holes of Detail J to 0.297" (total of 2 holes per side)

10-Weld D2744 Cap as per Dwg D2750 and QSI 004.Fill grooves in bend left from bending as per QSI 004

A/R ☐ Aluminum Rod

Batch: m112860

BE 10/05/25

10/5/25

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--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

11-Grind welds flush as per Dwg D2750

12- scribe batch #.

HB/5/26

120



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

8/10/05/26

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8/10/05/26

⑩

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QtyReject
QtyReject
NumberInsp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

1 M 10/5/26

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

DP 10-5-26

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
	Skidtubes								
Skidtubes									
Skidtubes									
	Memo	0.00							
	1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.								
	2-Open up holes of Detail K to 0.750" (total of 4 holes per side) as per dwg D2750.								
	3-Open float holes to .500" (4 per Side)								
	4-Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9)								
	5-Deburr and blow out all chips from inside of tube								
	6-Prepare tube for welding, remove alodine as required.								
	7-Bond web D2739 in place as per QSI 015 A/R <input type="checkbox"/> Sikaflex-291 batch: <u>M113435</u> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> exp. date: <u>10/11/20</u>								
	8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9) A/R <input type="checkbox"/> Aluminum Rod batch: <u>M112860</u> BE 10/05/27 <u>M114242</u> BE 10/06/07								
	9- At section AP-AP drill out x-bolt spacer to 0.404" BE 10/05/27 <u>BE 10/06/07</u>								
	10-Grind welds flush as per Dwg D2750 <u>BE 10/06/07</u>								
	11-Spot face ground handling holes section (total of 4 places per side) as per M114242 <u>BE 10/06/07</u>								

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Sequence ID/
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Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

dwg D2750

12-Deburr holes

BE 10/06/07

170



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

S 10/06/08

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

S 10/06/08

K

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 HandFinish	Pressure Wash per QSI005 4.3	0.00							
Hand Finishing	Memo Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.	0.00							① 106-8.
200 Powdercoat	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
Powder Coating	Memo START TIME: 1:00pm OVEN TEMPERATURE: 320°F FINISH TIME: 1:30pm	0.00							⇒ 10606108
210 QC	QC3- Inspect Part Finish	0.00							
Quality Control	Memo Inspect for foreign object per QSI 024	0.00							ml 10 06 09 ①

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	HandFinishing	0.00							
	HandFinish								
Hand Finishing	Memo	0.00							
	Install inserts as per dwg D2750								
230	HandFinishing	0.00							
	HandFinish								
Hand Finishing	Memo	0.00							
	1-Inspect for Foreign Objects								
	2-Spray inside of tube with "LPS-3"								
	batch: _____								
	3-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750								
	SIKA FLEX 241								
	BATCH: 113435								
	EXP DATE: 10/11								
	4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube								
	A/R 55-o'ring lube batch: 114189								
	5-Coat all exposed fasteners with "LPS Procyon"								
	batch: 104251								

N/A ml 1006-09

ml 10 06 09 ①

ml 10 06 09 ①

Dart Aerospace Ltd

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Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

5/10/06/07

(4)

250

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

10.6.98

260

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

5/10/06/10

(4)

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--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

270

0.00



Packaging

Packaging

Memo

0.00

Packaging

Package as per PPP D350-636-012

280

0.00



QC

QC21- Final Inspection - Work Order Release

Memo

0.00

Quality Control

10-6-10 SP

10/06/10 JF

MF
10-6-10

1358803

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Picklist Print

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Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 5/18/2010

Required Date: 5/25/2010

Comments:

IPP Rev: I 02.09.25 Rearranged procedure steps KJ

IPP Rev: J 06-03-29 As per Rev D EC

IPP Rev: K 06-07.13 As per dsi9343 EC

IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

Purchased

No

220

Each

7,062.000

38



Insert

Location

Loc Qty

Loc Code

PK011

7062

110768

7062

AN3C5A

Purchased

No

230

Each

453.0000

34



Bolt

Location

Loc Qty

Loc Code

ST350

325

114330

125

114523

200

ST351

128

113121

10

114108

45

114181

73

AN3C6A

Purchased

No

230

Each

565.0000

4



BOLT

Location

Loc Qty

Loc Code

ST351

565

111982

565

MA 10.06.09

MA 10.06.09

MA 10.06.09

W/O:		WORK ORDER CHANGES					
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IPP Rev: J 06-03-29 As per Rev D EC
IPP Rev: K 06-07.13 As per dsi9343 EC
IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC

Start Date: 5/18/2010

Required Date: 5/25/2010

Start Qty: 1.00

Required Qty: 1.00

AN6C44A Purchased No 230 Each 101.0000 4
BOLT

Location	Loc Qty	Loc Code
FG	2	
103964	2	
ST344	99	
111649	2	
114455	47	
114653	50	

MM 10-06-09

AN8C35A Purchased No 230 Each 56.0000 1
BOLT

Location	Loc Qty	Loc Code
FP	6	
110847	6	
ST346	50	
114442	50	

MM 10-06-09

★ NA91149C0332R B# 114341

AN960C101 Purchased No 230 Each 0.0000 38

washer
AN960C816L Purchased No 230 Each 106.0000 1
WASHER

MM 10-06-09

Location	Loc Qty	Loc Code
ST348	106	
110584	100	
111424	6	

MM 10-06-09

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Start Qty: 1.00

Required Qty: 1.00

IPP Rev: J 06-03-29 As per Rev D EC

IPP Rev: K 06-07.13 As per dsi9343 EC

IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC

D2745 Manufactured No 230 Each 146.0000 8



Bushing

Location Loc Qty Loc Code

ST023 146

52311 69

57914 77

mm 10.06.09

D3488-042 Manufactured No 230 Each 19.0000 1



Blade Fitting Assembly, RH

Location Loc Qty Loc Code

FP008 19

53918 19

mm 10.06.09

D3492-041 Manufactured No 230 Each 98.0000 8



Plug Assembly

Location Loc Qty Loc Code

FP013 98

57915 38

58180 60

mm 10.06.09

D3492-043 Manufactured No 230 Each 61.0000 8



Plug Assembly

Location Loc Qty Loc Code

FP 2

54682 2

FP013 59

57916 59

mm 10.06.09

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Start Qty: 1.00

Required Qty: 1.00

D3535-25 Manufactured No 230 Each 13.0000 1



Wearshoe

R

Location

Loc Qty

Loc Code

FP18

13

57943

13

D3536-25 Manufactured No 230 Each 6.0000 1



Gasket

B# 58820

Location

Loc Qty

Loc Code

FP12

6

57944

6

D3537-1 Manufactured No 230 Each 24.0000 3



Wearpad

B# 58178

Location

Loc Qty

Loc Code

FP

1

55465

1

FP17

23

57256

23

D3631-1 Manufactured No 230 Each 206.0000 8



Washer

B# 54388

Location

Loc Qty

Loc Code

ST076

206

52693

206

Wednesday, May 19, 2010 9:22:21 AM

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Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 5

Work Order ID: 58803



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 5/18/2010

Required Date: 5/25/2010

Comments:

IPP Rev: I 02.09.25 Rearranged procedure steps KJ

IPP Rev: J 06-03-29 As per Rev D EC

IPP Rev: K 06-07.13 As per dsi9343 EC

IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

D3672-1 Manufactured No 230 Each 1,375.000 4



Phenolic Washer

Location	Loc Qty	Loc Code
ST077	1375	
51674	375	
52505	1000	

10.06.09

D3791-1 Manufactured No 230 Each 5.0000 1



Wearplate

B# 58906

Location	Loc Qty	Loc Code
FP17	5	
56299	5	

10.06.09

D3793-1 Manufactured No 230 Each 10.0000 1



Wearshoe

Location	Loc Qty	Loc Code
FP18	10	
56300	1	
57945	9	

10.06.09

D3793-3 Manufactured No 230 Each 11.0000 1



Wearshoe

Location	Loc Qty	Loc Code
FP19	11	
57947	11	

10.06.09

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Page 5

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Wednesday, May 19, 2010 9:22:21 AM

Page 6

Work Order ID: 58803



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 5/18/2010

Required Date: 5/25/2010

Comments: IPP Rev: ☐ 02.09.25 ☐ Rearranged procedure steps ☐ KJ ☐

Start Qty: 1.00

Required Qty: 1.00

IPP Rev: J 06-03-29 As per Rev D EC

IPP Rev: K 06-07.13 As per dsi9343 EC

IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC

D3794-1 Manufactured No 230 Each 32.0000 1



Gasket

Location Loc Qty Loc Code

FP010 26

57942 26

FP014 6

57537 6

D3794-3 Manufactured No 230 Each 14.0000 1



Gasket

Location Loc Qty Loc Code

FP18 14

56066 14

MS21043-6 Purchased No 230 Each 826.0000 4



NUT

Location Loc Qty Loc Code

ST301 826

112314 826

MS21083C8 Purchased No 230 Each 41.0000 1



NUT

Location Loc Qty Loc Code

ST303 41

113845 11

114523 30

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Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Wednesday, May 19, 2010 9:22:21 AM

Page 7

Work Order ID: 58803



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 5/18/2010

Required Date: 5/25/2010

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ

Start Qty: 1.00

Required Qty: 1.00

IPP Rev: J 06-03-29 As per Rev D EC

IPP Rev: K 06-07.13 As per dsi9343 EC

IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC

NAS1611-010

Purchased No

230 Each

306.0000

8



O-RING

Location

Loc Qty

Loc Code

FP

306

110715

100

110915

206

NAS1611-013

Purchased No

230 Each

223.0000

8



O-RING

Location

Loc Qty

Loc Code

FP

223

114451

185

114496

38

AN8C21A

Purchased No

250 Each

113.0000

2



BOLT

Location

Loc Qty

Loc Code

ST345

113

111605

23

113558

50

114653

40

AN960C816L

Purchased No

250 Each

106.0000

1



WASHER

Location

Loc Qty

Loc Code

ST348

106

110584

100

111424

6

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Page 7

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, May 19, 2010 9:22:21 AM

Page 8

Work Order ID: 58803



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 5/18/2010

Required Date: 5/25/2010

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ

Start Qty: 1.00

Required Qty: 1.00

IPP Rev: J 06-03-29 As per Rev D EC

IPP Rev: K 06-07.13 As per dsi9343 EC

IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

D2741

Manufactured No

250

Each

28.0000

1



Blade, 350 Skidtube



10.6.95

Location

Loc Qty

Loc Code

ST466

28

55905

28

D3493-1

Manufactured No

250

Each

33.0000

2



Washer



10.6.95

Location

Loc Qty

Loc Code

ST065

33

57825

33

D3532-1

Manufactured No

250

Each

25.0000

2



Spacer



10.6.95

Location

Loc Qty

Loc Code

ST068

25

52321

25

D3672-13

Purchased No

250

Each

894.0000

2



Phenolic Washer



10.6.95

Location

Loc Qty

Loc Code

ST077

894

54363

894

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Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

Wednesday, May 19, 2010 9:22:21 AM

Page 9

Work Order ID: 58803



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 5/18/2010

Required Date: 5/25/2010

Comments:

IPP Rev: I 02.09.25 Rearranged procedure steps KJ

IPP Rev: J 06-03-29 As per Rev D EC

IPP Rev: K 06-07.13 As per dsi9343 EC

IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased No

250 Each

41.0000

1



NUT



10-6-95

Location

Loc Qty

Loc Code

ST303

41

113845

11

114523

30

D2600-3-BENT

Manufactured No

110 Each

2.0000

1



Extrusion Bent



2

Location

Loc Qty

Loc Code

LG

2

55462

1

57538

1

D2744

Manufactured No

110 Each

28.0000

1



Cap



1358903 ① 11/15/25

Location

Loc Qty

Loc Code

LG

28

47488

10

51922

18

D2739

Manufactured No

160 Each

1.0000

1



350 I Beam



1 BE 10/05/25

Location

Loc Qty

Loc Code

LG

1

57948

1

1358903 ① 11/05/26

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Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Picklist Print

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Work Order ID: 58803



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 5/18/2010

Required Date: 5/25/2010

Comments:

IPP Rev: I ☐ 02.09.25 ☐ Rearranged procedure steps ☐ KJ ☐
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By: EC

Start Qty: 1.00

Required Qty: 1.00

D2743 Manufactured No 160 Each 114.0000 8



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

114

50281

10

52310

24

57953

80

B59111 x8 BE 10/06/07

D3490-3 Manufactured No 160 Each 31.0000 4



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

31

57918

31

B59229 x4 BE 10/06/07

D3490-1 Manufactured No 160 Each 25.0000 4



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

25

57723

25

B59228 x4 BE 10/06/07

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

5

4

3

2

1

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

SHOP COPY
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ENGINEERING
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 58803
BS 10-5-19

RELEASED
6-10-77

GENERAL NOTES:

- 1) MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- 8) WELD PER DART QSI 004
- 9) INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- 10) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 11) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- 13) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS, CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEC 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.16		

DART AEROSPACE USA, INC.	
PORT HADLOCK, WA	
DESIGN NO. D2750	REV. F
TITLE 350 SKIDTUBE ASSEMBLY	SCALE NTS
SHEET 1 OF 11	

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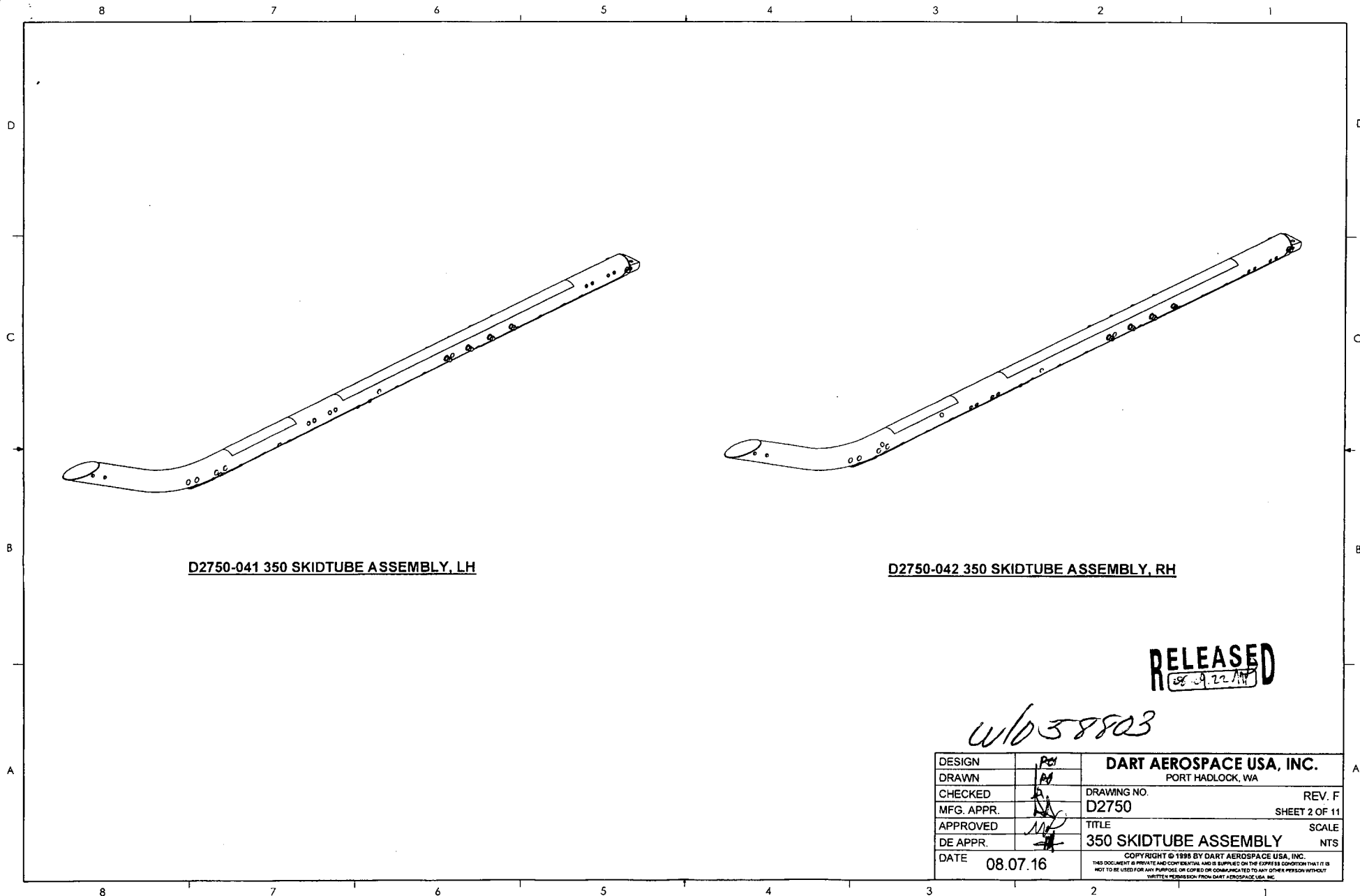
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RELEASED
88-09-22-144

W1058803

DESIGN	PC1	DART AEROSPACE USA, INC.	
DRAWN	RM	PORT HADLOCK, WA	
CHECKED	RM	DRAWING NO. D2750	REV. F
MFG. APPR.	RM	SHEET 2 OF 11	
APPROVED	RM	TITLE	SCALE
DE APPR.	RM	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1995 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

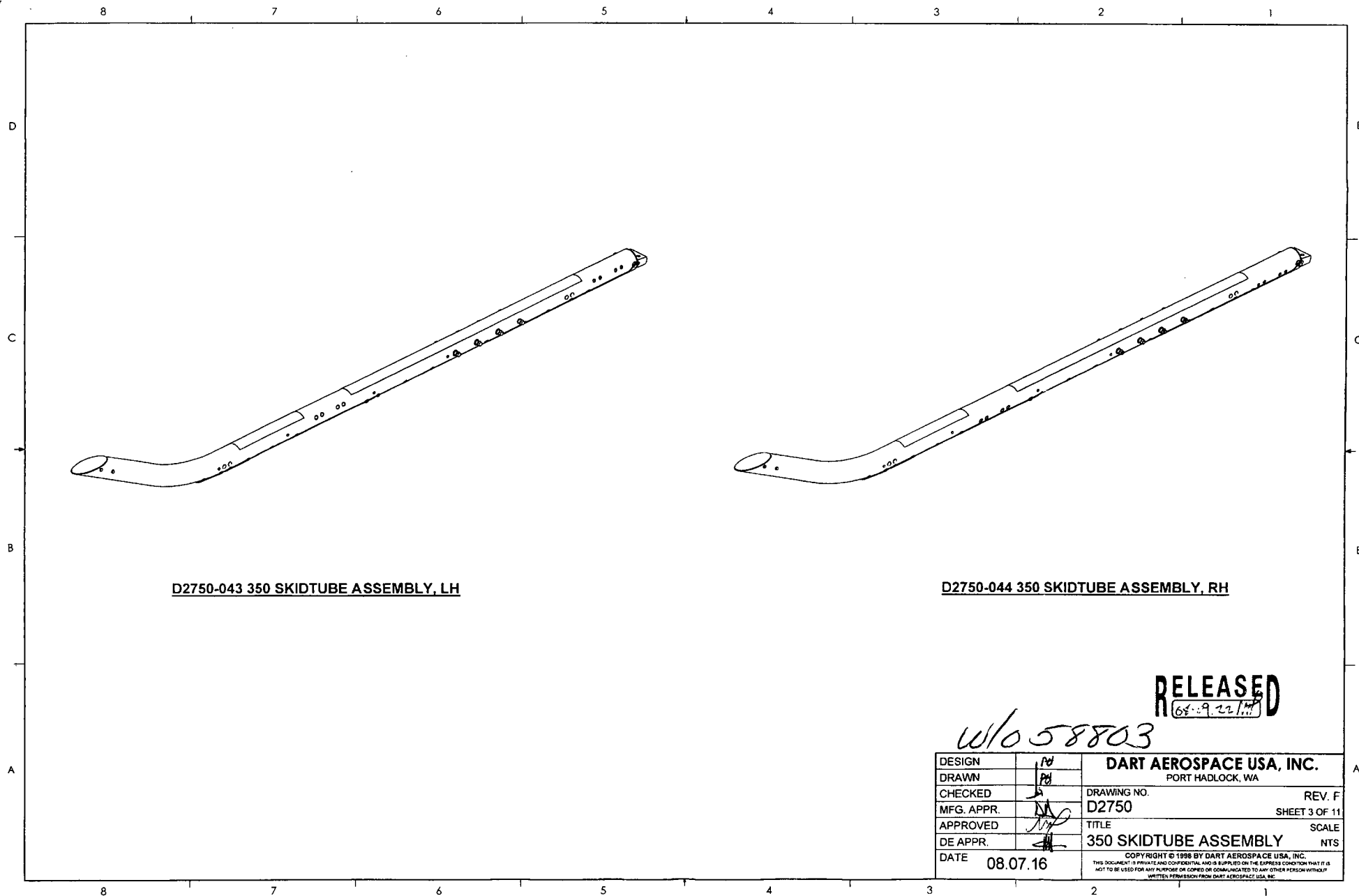
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2750-043 350 SKIDTUBE ASSEMBLY, LH

D2750-044 350 SKIDTUBE ASSEMBLY, RH

RELEASED
68-9-22/1

W/0 58803

DESIGN	PA	DART AEROSPACE USA, INC.	
DRAWN	PA	PORT HADLOCK, WA	
CHECKED	PA	DRAWING NO. D2750	REV. F
MFG. APPR.	PA	SHEET 3 OF 11	
APPROVED	PA	TITLE	SCALE
DE APPR.	PA	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1988 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

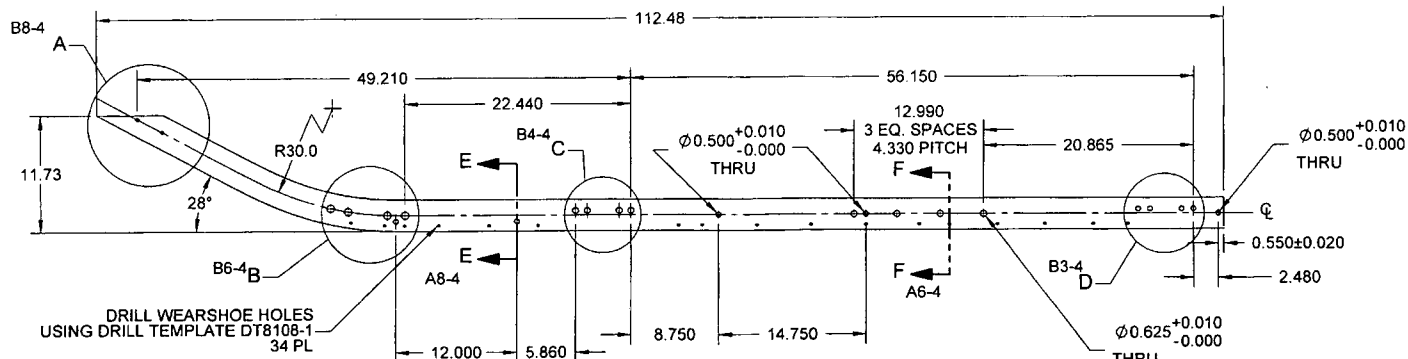
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

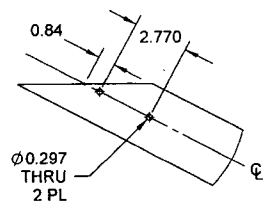
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

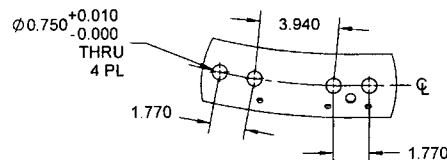
NOTE: Date & initial all entries



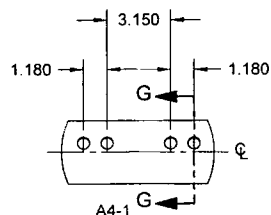
D2750-1 LH SKIDTUBE



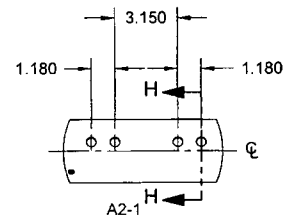
DETAIL A
SCALE 2X



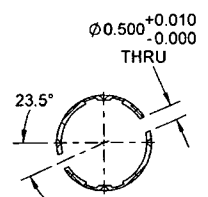
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SCALE 2X



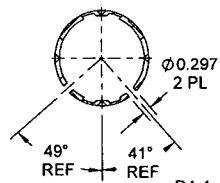
DETAIL C
SCALE 2X



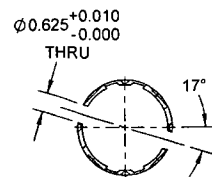
DETAIL D
SCALE 2X



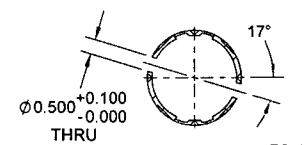
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

RELEASED

W058803

DESIGN	JP	DART AEROSPACE USA, INC.
DRAWN	JP	PORT HADLOCK, WA
CHECKED	JP	DRAWING NO. D2750
MFG. APPR.	JP	REV. F
APPROVED	JP	SHEET 4 OF 11
DE APPR.	JP	TITLE 350 SKIDTUBE ASSEMBLY
DATE	08.07.16	SCALE NTS

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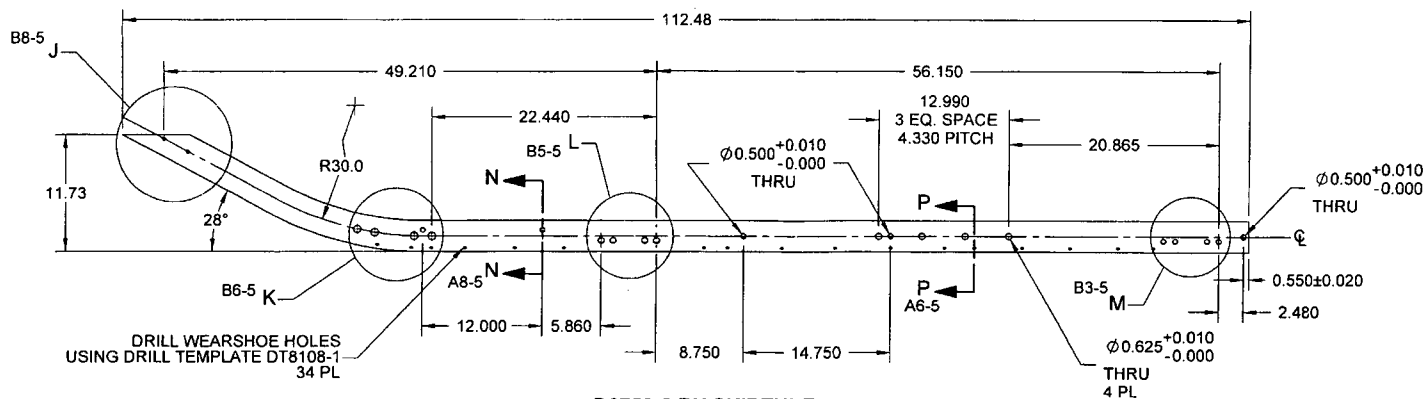
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

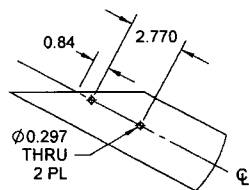
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

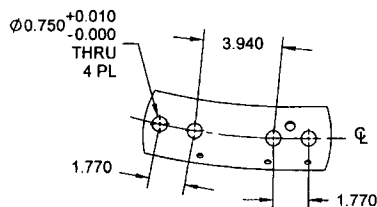
NOTE: Date & initial all entries



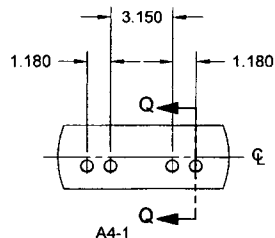
D2750-2 RH SKIDTUBE



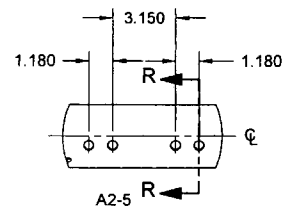
DETAIL J
SCALE 2X



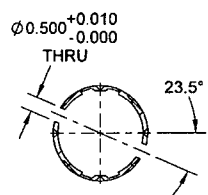
DETAIL K
SCALE 2X



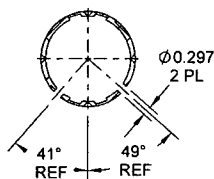
DETAIL L
SCALE 2X



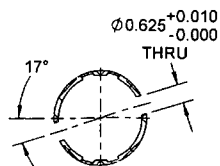
DETAIL M
SCALE 2X



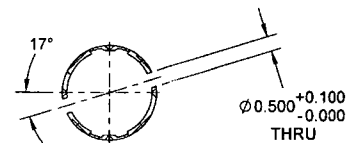
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

DESIGN		DART AEROSPACE USA, INC.
DRAWN		PORT HADLOCK, WA
CHECKED		DRAWING NO. D2750
MFG. APPR.		REV. F
APPROVED		SHEET 5 OF 11
DE APPR.		TITLE 350 SKIDTUBE ASSEMBLY
DATE	08.07.16	SCALE NTS

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W1058803

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

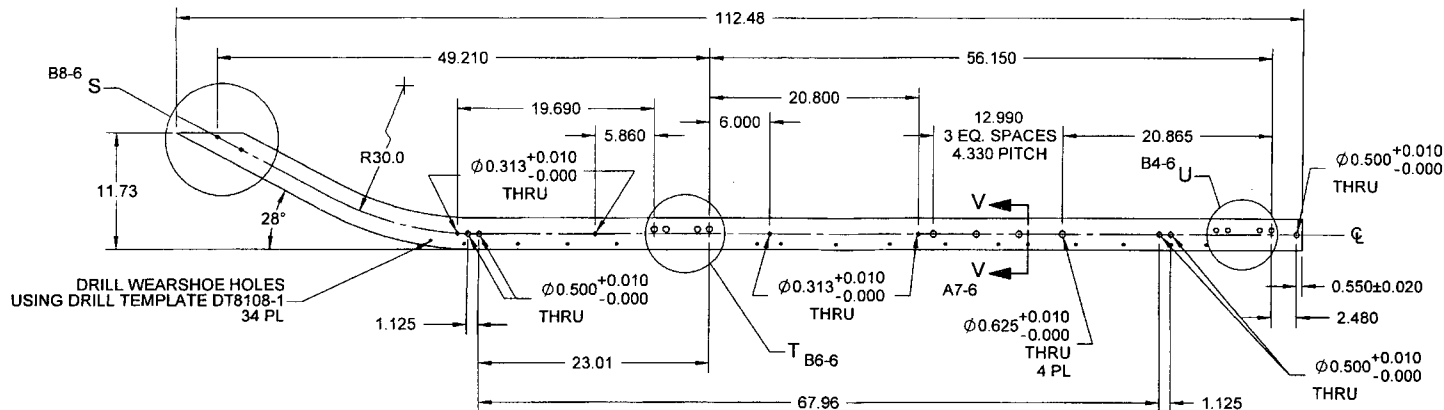
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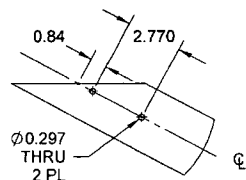
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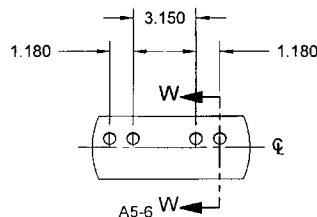
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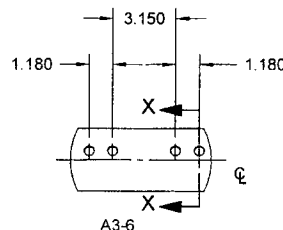
D2750-3 LH SKIDTUBE



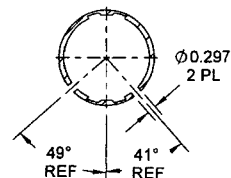
DETAIL S
SCALE 2X



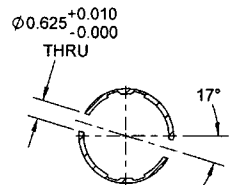
DETAIL T
SCALE 2X



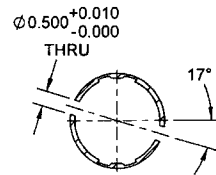
DETAIL U
SCALE 2X



SECTION V-V
SCALE 3X, 17 PL







SECTION W-W
SCALE 3X, 4 PL



SECTION X-X
SCALE 3X, 4 PL

W/0 58803

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DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 6 OF 11
APPROVED		TITLE	SCALE
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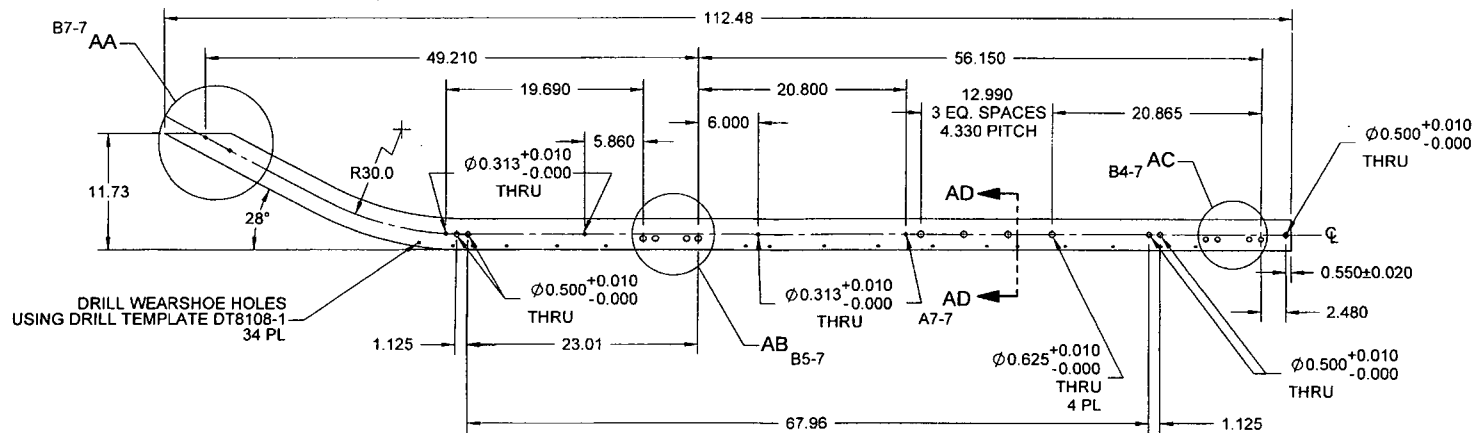
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

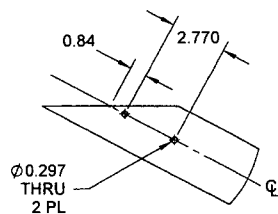
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

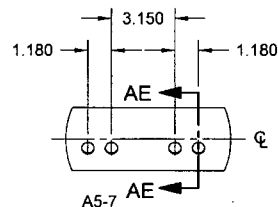
NOTE: Date & initial all entries



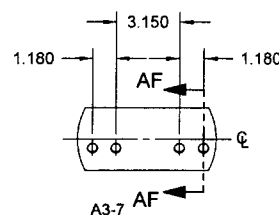
D2750-4 RH SKIDTUBE



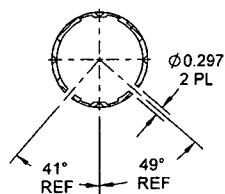
DETAIL AA
SCALE 2X



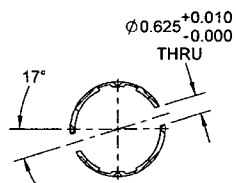
DETAIL AB
SCALE 2X



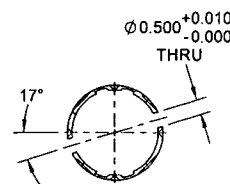
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

W/0 58803

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DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 7 OF 11
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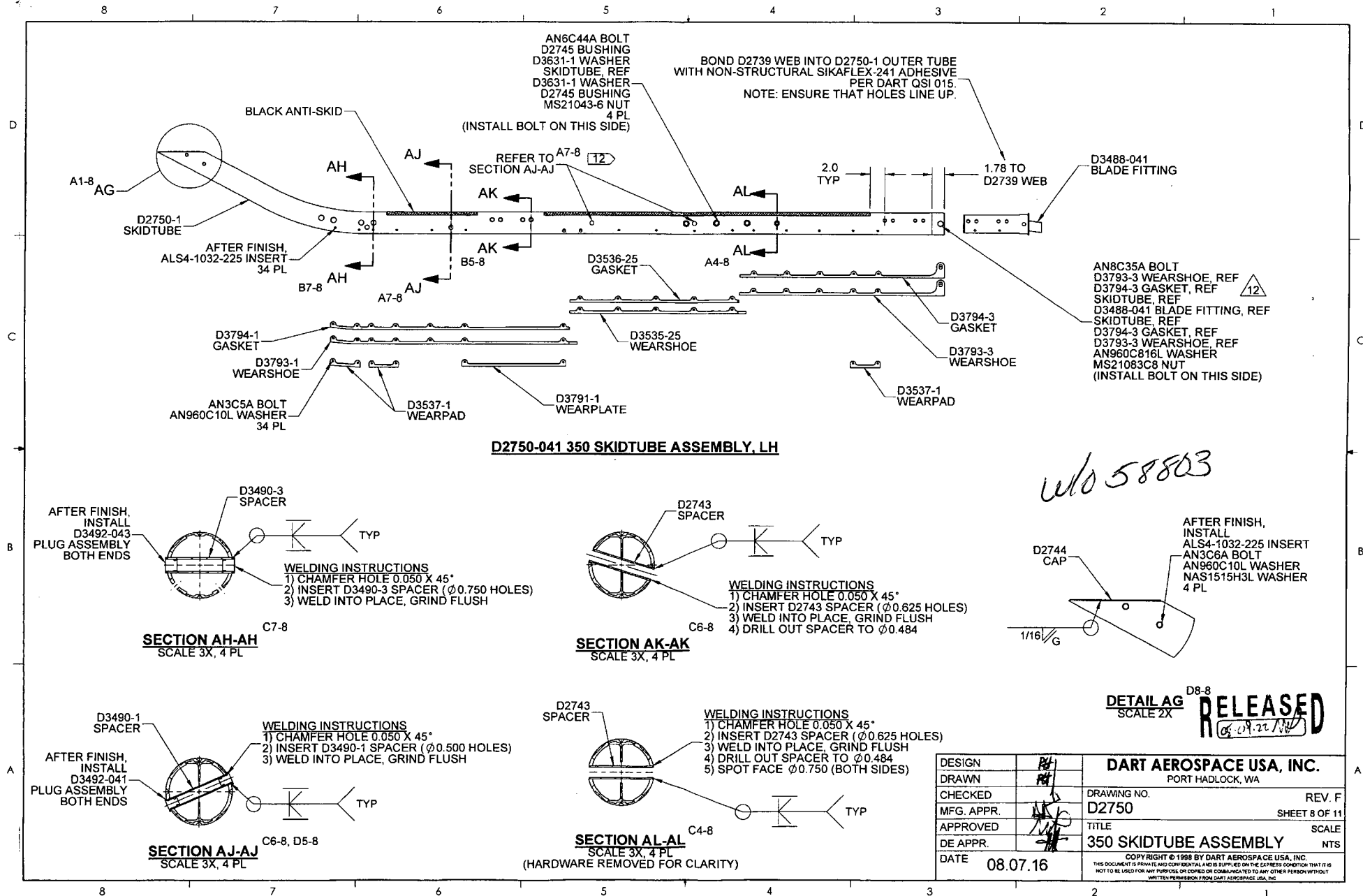
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

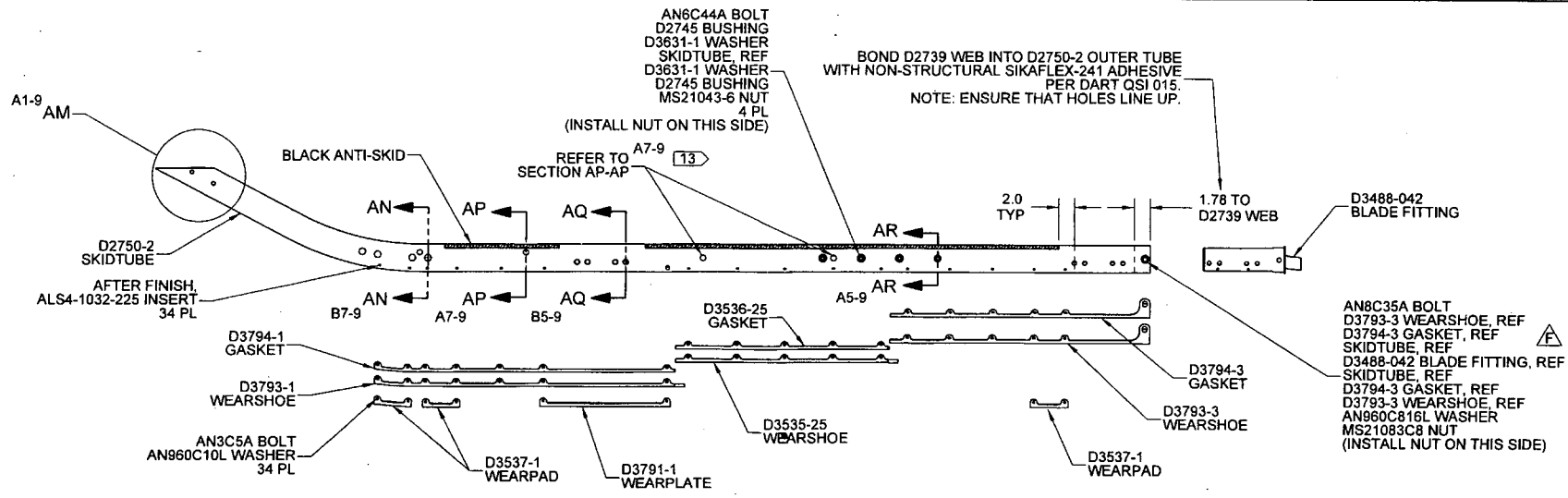
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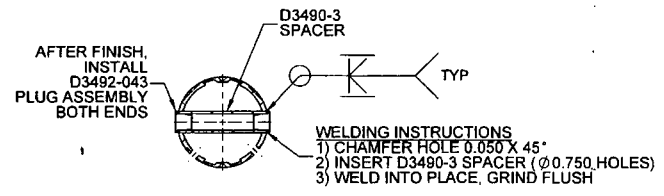
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

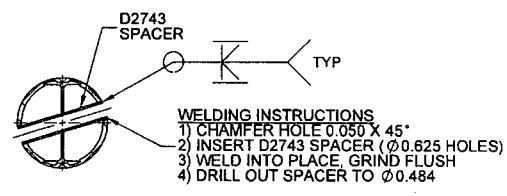
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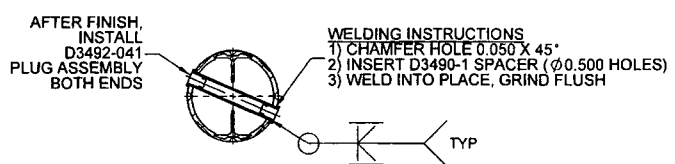
D2750-042 350 SKIDTUBE ASSEMBLY, RH



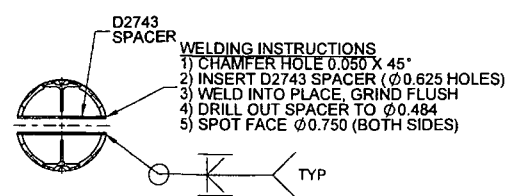
SECTION AN-AN
SCALE 3X, 4 PL



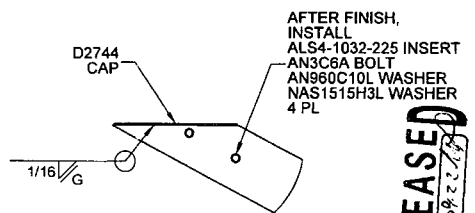
SECTION AQ-AQ
SCALE 3X, 4 PL



SECTION AP-AP
SCALE 3X, 4 PL



SECTION AR-AR
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



DETAIL AM
SCALE 2X

DESIGN	PA	DART AEROSPACE USA, INC.	REV. F
DRAWN	PA	PORT HADLOCK, VA	SHEET 9 OF 11
CHECKED	PA	D2750	SCALE
MFG. APPR.	MD	TITLE	NTS
APPROVED	MD	350 SKIDTUBE ASSEMBLY	
DE APPR.	MD		
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08/22/2016

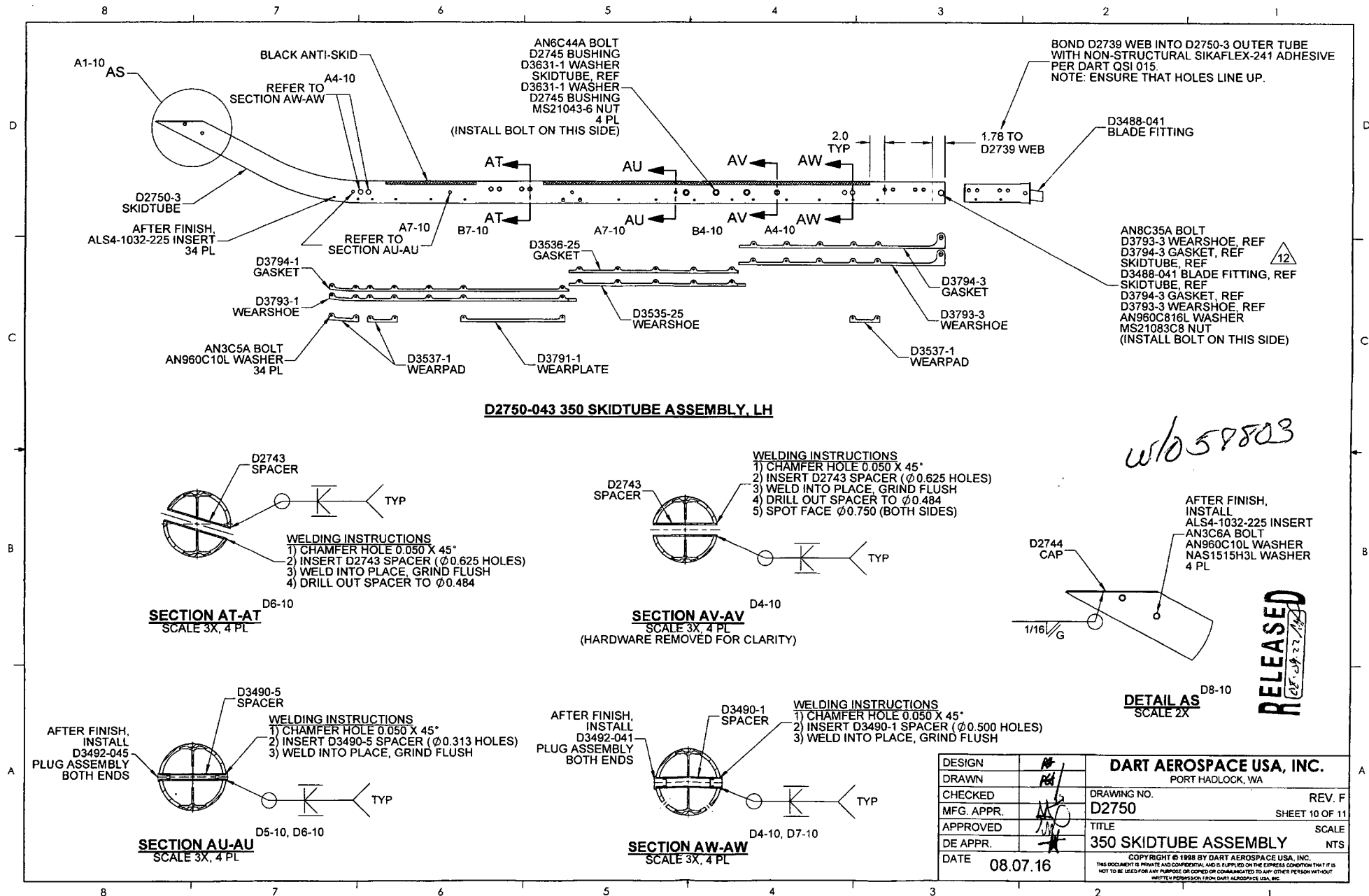
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

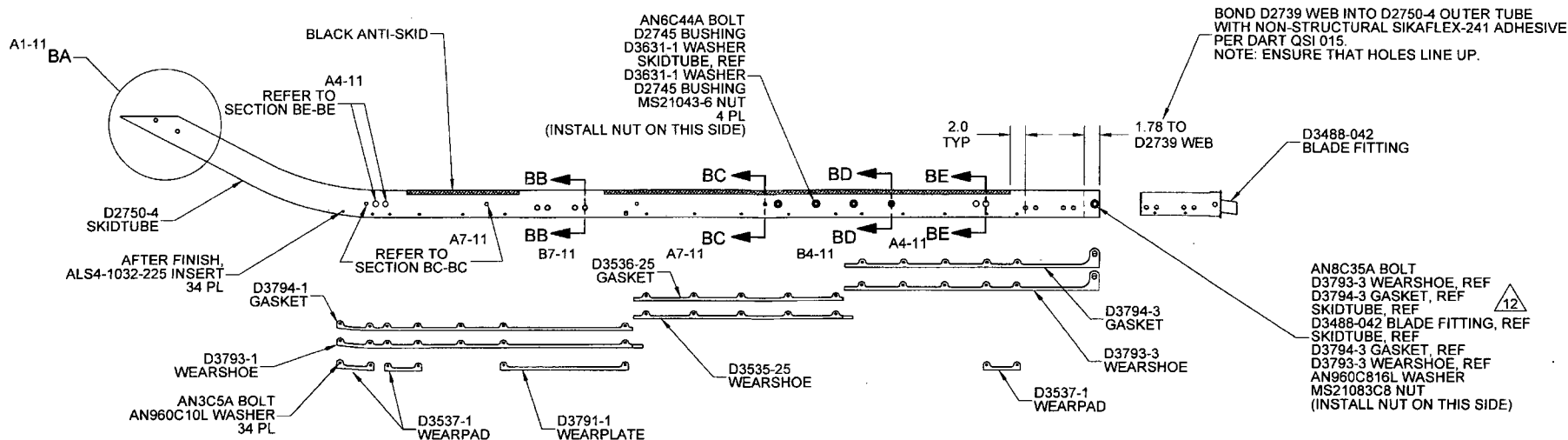
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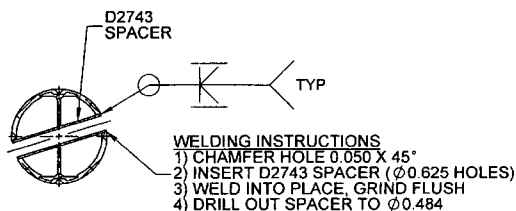
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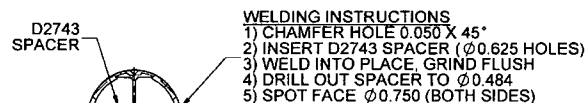
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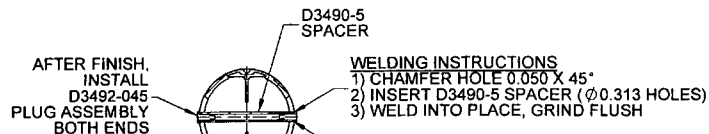
D2750-044 350 SKIDTUBE ASSEMBLY, RH



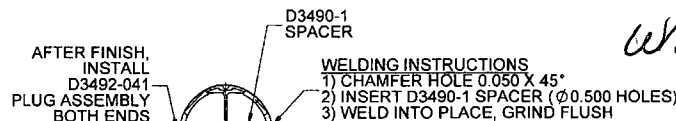
SECTION BB-BB
SCALE 3X, 4 PL



SECTION BD-BD
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)

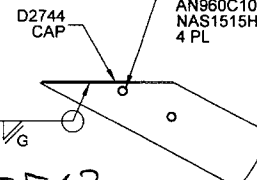


SECTION BC-BC
SCALE 3X, 4 PL



SECTION BE-BE
SCALE 3X, 4 PL

AFTER FINISH,
INSTALL
ALS4-1032-225 INSERT
AN3C6A BOLT
AN960C10L WASHER
NAS1515H3L WASHER
4 PL



DETAIL BA
SCALE 2X

RELEASED
06-07-22

W058803

DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO. D2750	REV. F
MFG. APPR.		TITLE	SHEET 11 OF 11
APPROVED		350 SKIDTUBE ASSEMBLY	SCALE
DE APPR.			NTS
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 233

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barday Elliott
Job number: 58816
Part number: D350-686 014
Description: 350 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Pat. Dunn Date of Test Coupon 10.06.01

Welder Barday Elliott Date of Test Coupon 10.06.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld